

IN THE UNITED STATES DISTRICT COURT FOR THE
NORTHERN DISTRICT OF OKLAHOMA

(1) DENNIS R. CORNWELL, Individually,)
and as Personal Representative)
of the Estate of RENIA A. CORNWELL,)
Deceased,)

Plaintiff,)

v.)

(1) UNION PACIFIC RAILROAD CO.,)
a Delaware Corporation,)

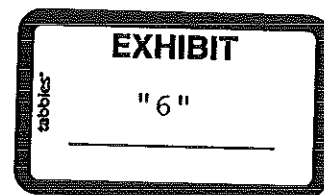
Defendant.)

CASE NO. 08-CV-638-JHP-TLW
JUDGE JAMES H. PAYNE

DECLARATION OF DANIEL A. JOSEPH, Ph.D.

1. My name is Dr. Daniel A. Joseph. I am a software systems expert. My Curriculum Vitae is attached hereto. I have been advised that the Plaintiff's decedent in the above styled case was killed when a Union Pacific train collided with the vehicle being driven by Plaintiff's decedent. I have further been advised that the locomotive for such train contained an event recorder and a video recorder. It is my understanding that the event recorder records events such as when a train crew member activates the train's whistle (horn) and other events. It is also my understanding that a video recorder recorded video and sound and was intended to record the sound of the train's whistle (horn).

2. It is further my understanding that when an accident occurs, Union Pacific downloads data from the event recorder and the video and sound from the video recorder onto a laptop computer and then later prints the data downloaded from the event recorder to a paper source and saves the video and sound to a DVD or CD. Anytime data is downloaded to a computer or saved or sent to a printer, the data may be altered in any manner the person using the data would desire. A data stream that would accompany a video which is downloaded to a DVD or CD could also be altered in any way the person who downloaded the video would desire.



3. The ability to alter such data as described above would exist regardless of the software system used to initially capture the data or to download the data from the locomotive event recorder or video system. The ability to alter such data as described above exists regardless of the nature or method of security that might be programmed into the software system which captured or downloaded such data and regardless of the complexity of the access and/or password system that is programmed into the software system. This is because data can only be printed from storage media and once the data leaves the software system to a printer or is saved to storage media, such as a disk drive, DVD, or CD ROM, the security system for the software program no longer protects the data.

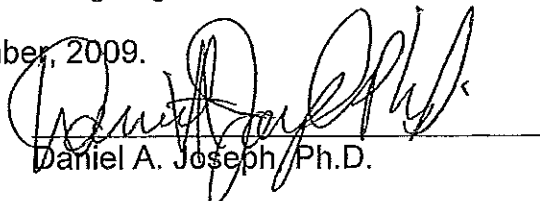
4. Therefore, any data that was downloaded from the event recorder aboard the locomotive which is the subject of this action which was printed could have been altered by a person with rudimentary computer skills after being downloaded or sent to a printer to show that the whistle (horn) sounded when no such event was recorded aboard the train. The same is true with the data stream of the video after being downloaded and subsequently saved to a DVD or CD.

5. While I am not familiar with the specifics of the software systems which Union Pacific uses to download data from its locomotives, it would be highly unusual if such software system did not provide that such data could be altered using the same software system.

6. I have no information that any such data was altered. However, if the video recorder did not record the sound of the locomotive's whistle (horn) and the video recorder and its sound system were properly operating and there existed no malfunction of the whistle (horn) activation system between the point of activation and the whistle (horn), and there was no malfunction of the whistle (horn) system itself and the event recorder and/or data stream for the video indicated the whistle was blown, when the train crew did not activate the whistle (horn) system, such alterations could be a probable explanation for the printout of the event recorder and data stream of the video indicating the whistle had sounded when it did not.

I declare, certify, verify and state under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Dated this 12th day of November, 2009.


Daniel A. Joseph, Ph.D.



December 29, 2009

Mr. John Merritt, Esq.
Merritt & Associates, P.C.
917 N. Robinson
Oklahoma City, Oklahoma 73102

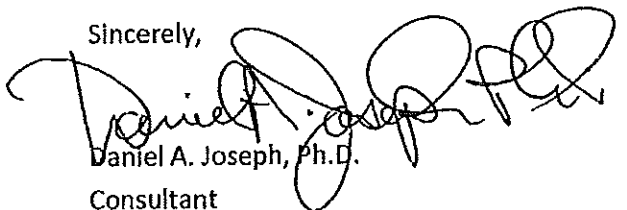
Re: **Dennis R. Cornwell, etc. vs. Union Pacific Railroad Co.**, USDC, No. Dist of OK, Case No.: 08-CV-638-JHP-TLW. Merritt Associates, P.C. File No.: 51542

Dear Mr. Merritt:

- (1) Please note that I adopt my declaration in this case executed the 12th day of November 2009, as part of my expert report with the modifications that might be contained herein.
- (2) My name is Dr. Daniel A. Joseph, I hold a Ph.D. in Management Information Systems with a minor in Computer Science, and I am a software systems expert. My Curriculum Vitae is attached hereto.
- (3) I have been advised that the Plaintiff's decedent in the above styled case was killed when a Union Pacific train collided with the vehicle being driven by Plaintiff's decedent. I have further been advised that the locomotive for such train contained an event recorder and a video recorder. It is my understanding that the event recorder records events such as when a train crew member activates the train's whistle (horn) and other events. It is also my understanding that the video recorder records video and sound and is intended to record the sound of the train's whistle (horn).
- (4) It is further my understanding that when an accident occurs, (a) personnel from Union Pacific remove the video recorder from the train involved and transport it to a Union Pacific Railroad (UPRR) facility where the data are presumably downloaded by UPRR personnel and stored on digital media; and (b) all data relating to the accident that have been recorded on the event recorder are downloaded onto a UPRR-owned computer brought on board the locomotive after the accident and that from there it is physically transported to a UPRR facility. In other words, it is my understanding that all digital data relating to the accident are removed from the train and held in the custody of Union Pacific Railroad personnel who, presumably, download the data to their own digital media and later print the downloaded data to a paper source or transfer it to some other form of output if they wish. This being the case, it is possible that UPRR personnel or anyone else who has access to the data could alter it in any way they might desire. This is the case for the data downloaded from the event recorder as well as the video stream from the video recorder and any other data in their possession.
- (5) The ability to alter such data as described above would exist regardless of the software system used to initially capture the data or to download the data from the locomotive event recorder or video system. The ability to alter such data as described above exists regardless of the nature or method of security

- that might be programmed into the software system which captured or downloaded such data and regardless of the complexity of the access and/or password system that is programmed into the software system. This is because once the data leaves the software system to a computer system, printer, or data recordation system (such as a DVD or CD ROM), the security system for the software program no longer protects the data.
- (6) Therefore, any data that was downloaded from the event recorder aboard the locomotive which is the subject of this action could have been altered by a person with rudimentary computer skills after being downloaded to show that the whistle (horn) sounded when no such event was recorded aboard the train. The same is true with the data stream of the video after being downloaded and subsequently saved to a DVD or CD.
- (7) While I am not familiar with the specifics of the software systems which Union Pacific uses to download data from its locomotives, it would be highly unusual if such software system did not provide that such data could be altered using the same software system.
- (8) I have been awaiting receipt of a computer containing the Wabtec event recorder software, which I understand from you was to be provided by the Wabtec Corporation. You have advised me that Union Pacific has refused to sign the Non-Disclosure Agreement (NDA) required in order for me to receive a computer from Union Pacific containing such software. Please note that upon receipt of such computer containing such software I may have additional opinions in this case which I have been prevented from expressing due to Union Pacific's failure to execute the NDA with Wabtec. I might also have additional requests relating to source code or other computer-related artifacts.
- (9) In addition, I have recently learned that we have not been furnished a full printout from the event recorder and perhaps not even from the video recorder. If I am later furnished further information in this regarding this, I may have additional opinions and requests as well.
- (10) I have no information that any such data was altered. However, if the video recorder did not record the sound of the locomotive's whistle (horn) and the video recorder and its sound system were properly operating and there existed no malfunction of the whistle (horn) activation system between the point of activation and the whistle (horn), and there was no malfunction of the whistle (horn) system itself and the event recorder and/or data stream for the video indicated the whistle was blown, when the train crew did not activate the whistle (horn) system, such alterations could be a probable explanation for the printout of the event recorder and data stream of the video indicating the whistle had sounded when it did not.

Sincerely,



Daniel A. Joseph, Ph.D.
Consultant

Curriculum Vitae of Daniel A. Joseph, Ph.D. - Summary Page**Qualifications Include:**

- **Keywords:** ABAP, business processes, C#, COBOL, data modeling, database, expert witness, FORTRAN, HTML, MM, PL/SQL, PP, project management, Project System, programming, PS, requirements analysis, RFID, SAP, SAP configuration, SCM, SD, SOA, testing, SQL, system architect, systems analyst, T-SQL, UML, variant configuration, web, web flow engine, workflow.
- **Skill Set:**
 - + **SAP R/3 Modules:** MM, PP, SD/Variant Configuration, PS, ABAP, Web Portals, and Workflow.
 - + **Database:** T-SQL, PL/SQL, Data Modeling, & SQL Server & Oracle DB Conversion/Creation.
 - + **Programming:** ABAP, C#, COBOL, Pascal, BASIC, VB, FORTRAN, and HTML – it takes me about 2 weeks to learn a new language.
 - + **Selected Software:** Microsoft Office Suite 2007; MS Project; Visual Studio; MVS JCL; SQL Server; Oracle DB & Developer; IBM WebSphere Business Modeler; Macromedia Developer Suite; Rational Rose Professional (UML) ; SAP R/3; and more.
 - + **Project Management:** Project Estimation & Project Management Using MS Project.
 - + **Development:** *All aspects*, including Requirements Analysis, Process Design/Reengineering, UML, Rational Rose Professional, understand Networking, Computer, and OS technologies well. SEPG (CMM) member – helped implement CMM-2 & CMM-3 at Eastman Kodak Company.
 - + **Teaching:** *Virtually every aspect of Software Development and Configuration at MIS Undergraduate & MBA levels*, including Project Management; Systems Analysis & Design (UML & Procedural); Several Programming Languages; SAP Configuration; Workflow; Networking Technologies; Computer & OS Architectures; and more. Also taught Strategic Management, and Economics.
 - + **Certification:** SAP-Certified ASAP Implementation Methodology Consultant (S0001189554)
 - + **Legal Expert Witness:** Provided technical advice, evaluated project management & training practices, and searched for and identified all RICEFW & Variant Configuration associated with a fully-implemented R/3 6.0 system with all modules in use. Report was written and deposition was made for Plaintiff. Case involved theft of a complete, leased R/3 system that was developed for Defendant. Result: 7-figure out-of-court settlement in our favor.
- **Industries:** + Manufacturing + Banking + Insurance + Health Insurance + Higher Education + Engineering + Software +
- **SAP Americas' Training (>64 days):** + PP + ASAP + 25 days of ABAP/4 + PS + B2B + I DES organization and use + IMG configuration for manufacturing companies +
- **Academic Degrees:**
 - ✓ Ph.D. (Management Information Systems; Minors in Computer Science & Organizational Behavior),
 - ✓ M.B.A. (Business Administration),
 - ✓ M.A. (Economics),
 - ✓ B.S. (Commerce).
- **Demonstrated capability for rapidly learning new technologies, business processes, & concepts.**
- **Excellent Communication, Presentation, & Interpersonal Skills:**
 - 11 published articles relating to Systems Analysis. Also several legal and consulting reports.
 - Over 20 years' full- or part-time teaching at graduate & undergraduate levels and as well as professional workshops.
 - Reputation for being able to quickly establish rapport with clients/users and rapidly become a contributing member of project teams.

Daniel A. Joseph, Ph.D.

daniel.joseph@rit.edu • 19 Glendower Circle, Pittsford, New York 14534 • (585) 734-3266 • <http://people.rit.edu/~dajbbu>

Education & Training:

Ph.D. (Management Information Systems. Minors: Computer Science & Organization Behavior). SUNY University at Buffalo. 1985

M.B.A. (Business Administration), SUNY University at Buffalo.

M.A. (Economics), SUNY University at Albany.

B.S. (Commerce), Niagara University, Niagara University, NY.

Certification: Certified SAP ASAP Implementation Methodology Consultant (Cert. number available on request). 2000

List of specific courses I have taught:

- MIS Project Mgt. with MS Project
- Systems Analysis & Design
- UML w/ Rational Rose Professional
- SAP R/3 Business Processes
- ERP (SAP R/3) Implementation
- SAP R/3 Workflow Design
- Data Structures
- Macroeconomics
- Microeconomics
- Presented several workshops to executives
- Database Management Systems (Data Modeling w/ ERD; SQL; Oracle DBMS; MS Access)
- Networking Technologies
- Computer & Operating System Architectures
- Introductory & Advanced BASIC, COBOL, FORTRAN, & Pascal
- Decision Support & Expert Systems
- Software Quality Metrics & Testing
- Money & Banking
- Consumer Economics

SAP R/3 & IBM WebSphere Training (64 days):

- Project System (PS) course with access to R/3 7.0 client for practice and extension of knowledge and additional work. Created a Project with Work Breakdown Structures (WBS) & Network Activities, Project Plans with Easy Cost Planning and Project Planning Board, and Requisitions and Purchase Orders for WBS; Ran Settlements and Project Reports; executed Final Settlement.
- SAP R/3 IMG Configuration (10-Days -- implemented 3 small manufacturing companies) (SAP University Alliance).
- Business Workflow. Introduction. (2-Day course) (BC600 - 4.6A); Build & Use. (5-Day course) (BC601 - 4.6A); Programming (3-Day course) (BC610 - 4.6C).
- NetWeaver Introduction (2-Day course) (SAP University Alliance).
- Business to Business Procurement (3-Day course.) (ECO210 - 4.5).
- Manufacturing Planning and Execution (5-Day course.) (LO050 - 4.0A) Level-2 overview of the R/3 Production Planning Module.
- ABAP Development Workbench (18-day Partner Academy course) (PABC40 - 3.1h) ~ Basis Technology Overview ~ Introduction to ABAP Development Workbench (ADW) ~ ABAP Dictionary ~ ADW Reporting ~ Custom Developments ~ ADW Dialog Programming ~ ADW Data Interfaces ~ Enhancement and Modifications ~ ADW Communications Interfaces ~
- Managing ABAP Development Projects (2-Day course) (MBC40 - 4.0A).
- Developing ABAP/4 Internet Applications (5-Day course) (BC440 - 4.0A).
- ASAP SAP R/3 Implementation Methodology; ASAP Tools; ASAP Tools in Detail; Advanced Customizing Tools. (5-days altogether).
- IDES System Organization & Use (3-Day course) (SAP University Alliance).
- IBM WebSphere Introduction (1-day course).
- IBM WebSphere Business Modeler (30-hour self-paced, programmed instruction course) (IBM Academic Initiative).

Software Development Process Improvement, Measurement, & Quality Training:

- Personal Software Process. Forty-hour course, with 150 hrs of homework, taken at the Software Engineering Institute (SEI).
- Understanding Enterprise Architecture & Enterprise Architecture Implementation Strategies. (4-Day course presented by John Zachman & Stan Locke).
- Reverse Engineering using Cyclomatic Complexity Analysis (McCabe's three-day course).
- IDef0: A Tool and Process for Analyzing Manufacturing Systems, (two-day course).
- Software Measurement and Estimation, Four-day course presented by Capers Jones.

Curriculum Vitae of Daniel A. Joseph, Ph.D.

- E-Business Workshop. (2-Day course) seminar sponsored and presented by Arthur Anderson Consulting & IBM eBusiness Solutions. Focus was on planning and implementing Internet-based businesses.
- aimware Deployment. 20-hour course focused on the implementation of aimware, a process asset repository.
- Team Building. One-Day course presented by Eastman Kodak's Development Center.
- Managing Change. Two-day course in change management presented by Eastman Kodak.
- Motorola TQM University Challenge Program, Five-day TQM workshop.
- Quality, Productivity, and Competitive Edge: A four-day seminar presented by Dr. W. Edwards Deming.

Networking Technologies and Hardware Training:

- Microsoft Networking Essentials. Self-paced study module from Microsoft.
- Administering Windows NT 4.0. 4-day, Instructor-Led, Ziff-Davis course.
- Supporting Microsoft® Windows NT 4.0 - Core Technologies. 5-day, Instructor-Led, Ziff-Davis course.
- Internetworking with TCP/IP. CBT course in Internet protocols.
- Networking Technologies. Forty-four hour undergraduate course at RIT.
- Novell Netware. Systems Administration; Advanced Systems Administration.

Professional Experience:

College of Business, Rochester Institute of Technology, NY
Associate Professor of Management Information Systems

Sep '84 – Present

- Developed over 15 graduate/undergraduate courses, 5 certificate programs and implemented, maintained, and evolved the MIS program • List of courses developed and taught appear at end of this section • Served on College-wide Curriculum Committee, Tenure & Promotion Committee, and other College committees as well as Institute-wide committees •
- Taught courses to undergraduate MIS majors and MBA students: SAP R/3 Configuration; Project Management, Systems Analysis & Design, UML, Programming, Web Site Development, Networking, OS, & Hardware Technologies; DBMS – T-SQL, PL/SQL, & Data Modeling; Decision Support & Expert Systems.
- Technical Lead for SAP R/3 3.1g installation.
- Configuration of SD, PP, MM, MRP, FICO for three small manufacturing companies (products: Candy Bars; Yoyos; & Ball Point Pens. Including installation of Chart of Accounts; configuration of all materials, routing sheets, and BOMs; configuration of Inquiry-to-Cash, Purchase-Request-to-Pay, and Build-to-Ship; configuration of vendors, vendor tolerances, sales representatives, users, etc.
- Development of workflows using Webflow Engine & HR module.
- Development of portal content, including web-based iViews, SAP iViews, & News Feeds.
- Troubleshooting for configuration problems created by students as they implemented R/3 configurations.

Daniel A. Joseph, Ph.D., LLC, Pittsford, NY
Client List:

1987 – Present

- eLogic Group, LLC, Pittsford, NY Jan '08 – Jun '08
Variant Configuration (LO-VC/SD) (Over 900 hours) Dec. '08 – Jan '09
 - Completed SAP R/3 v 7.0 Variant Configuration project including constraint/dependency modeling, KMAT & Super BOM Definition; knowledge base/runtime version generation, ALE to new client, and Functional Acceptance Testing (FAT1&2).
 - Worked in SD & MM modules.
 - Contact: Lawrence Matusek (eLogic); Andrew Kendall (Sage Software).
- Henry, O'Donnell, Dahnke & Walther, P.C., Fairfax, VA. Dec '07 – May '08
SAP Expert (Over 270 hours)
 - Discovery and evaluation of all the RICEFW and variant configurations (over 1,200 materials combined with 110 furniture frames) in an R/3 6.4 instance with all modules implemented in support of a large furniture manufacturer.
 - Marquette Equipment Finance, LLC v. Rowe Fine Furniture, Inc., et al. Case No. 1:07-cv-00676-LO-TRI. United States District Court for the Eastern District of Virginia, Alexandria Division.
 - Contact: Joel Dahnke, Esq.

Curriculum Vitae of Daniel A. Joseph, Ph.D.

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- **Computer Task Group (CTG), Amherst, NY** Jul '01
SAP Support Service
 - Provided advice regarding Integrated Business Systems support to a team of executives involved in the design of a new CTG service.

 - **Eastman Kodak Company, FAST Team - ERP, Rochester, NY** May '99 – Nov '99
SAP Training Design
 - 6 months developing training for ABAP programmers.
 - Provided advice regarding course organization for proposed in-house SAP Production Planning/Workflow Design & Build courses.

 - **Gillespie Associates, NY** Jul '99
SAP Training Sales
 - Specialists in Training People, Improving Performance, and Implementing Change. 25 Park Avenue, Rochester, NY.
 - Helped negotiate SAP training contracts.

 - **MicroText, Rochester, NY** May '01 – Mar '02
Chief Technical Officer
 - Provided technical advice to start-up offshore engineering services group at Lennox Center Business Incubator - software engineering applications, embedded systems, etc.

 - **The Knowledge Company, Fairfax, VA.** Jan '01 – Sep '01
Expert Witness
 - Expert Witness for Immigration and Naturalization Service H1-B Visa applications.
 - Evaluated work experience of personnel involved in MIS activities.

 - **Manitack Pump Services** May '98 – Nov '00
Web/Business Design
 - An Internet-Based (www.Manitack.com) Request for Quotes/ Classifieds service catering to businesses with annual revenues up to \$500 million and dealers in the Pump Industry. Used HTML 2.0 forms.
 - Responsibilities included: technical interface with vendors; strategic planning; product design, and general management of the site.

 - **Eastman Kodak Company, NY** May '98 – Jun '99
Process Improvement - CMM SEPG
 - Worldwide Information Services, Global Apps, Rochester, Full-time member of Kodak's Software Engineering Process Group (SEPG) for summer 1998 and academic year 1999 (Faculty Intern), focus was on software process improvement.
 - Specifically, helped bring one unit to CMM Level 2 and another from CMM-2 to CMM-3. Job continued two to four days each week between September 1998, and June 1999, through Adecco consulting agency, Rochester, NY.

 - **Stickley Furniture Company, Manlius, NY** Aug '97 – Sep '97
IT Department Assessment & Reorganization
 - Evaluated MIS organization and recommended reorganization of the department, establishment of a Steering Committee, training plan for personnel, and development of a system for tracking project effort to help improve future estimation activities.
 - Recommendations were adopted.
 - Helped find a new CIO for the company.

 - **Erie County Crisis Services, Buffalo, NY** Mar '97 – Sep '97
LAN Development
 - Helped design a local area network to support this social service agency.

 - **World Business eXpress (WeBX), Canandaigua, NY** Nov '95 – Oct '96
Web Site Design
 - Designed and developed an interactive Internet Business on the World Wide Web using HTML 1.0.

 - **HCR Corporation, Rochester, NY** Oct '95
Database Conversion
 - Converted files from dBase to proprietary system format using UNIX utilities.
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Curriculum Vitae of Daniel A. Joseph, Ph.D.

- Integrated Marketing Systems, Inc. Buffalo, NY Jan '93 – Apr '93
System Analysis & Programming
 - Designed/implemented application using Microsoft Access to support customer satisfaction analysis for Waste Management Corporation.
 - Subcontracted through Marketing Research located in Chicago, Illinois.
- Consler Filter Corporation, Honeoye Falls, NY Nov '92 – Jun '93
System Analysis & Programming
 - Reengineered front office activities at this filter manufacturing company.
 - Helped improve its use of SYMIX (job shop production management software).
- Eastman Kodak Company, Rochester, NY Sep '90 – May '91
Production Process System Analysis
 - Led team in IDef-0 analysis of through-hole board electronics assembly and prototype development processes in effort - reduce cycle-time.
- Raymond Corporation, Greene, NY Feb '87 – May '87
Class A MRP-II System Analysis
 - Evaluated manufacturing problems and recommended a solution that brought this organization to Class-A MRP II status.

Canisius College • SUNY University @ Buffalo • Buffalo State College • Niagara County Community College. Sep '80 – Aug '84
Instructor of Management Information Systems

- Taught: Data Structures; DBMS; COBOL; Pascal; FORTRAN; IT; Systems Analysis & Design; Business Computing; Business Strategy; Macro/Micro Economics & Money & Banking - full-or Part-time while working toward my Ph.D. Degree.

M&T Bank, Williamsville, NY Jun '79 – Sep '80
Senior Systems Analyst (Development Team Leader).

- COBOL MVS Environment - included training on the Hogan Bank Transaction Processing System in Dallas.

Blue Cross of Western New York, Buffalo, NY Jun '78 – Jun '79
Programmer/Analyst

- Systems Development, Programming, & Analysis in a COBOL/IMS/MVS environment.

Research, Presentations, Lab Designs, & Service SummaryWork in Progress:

- 1 article in-progress focused on Service-Oriented Architecture (SOA) implementation.
- 2 articles in-progress dealing with consumer attitudes toward RFID use in General and Healthcare Services in particular.

Articles published in Refereed Journals:

- 2005 Strategic Predictors of Successful Enterprise System Deployment, *The International Journal of Operations and Production Management*, September 23, 2005. Co-authored with John E. Ettlie, Victor Perotti, and Mark Cotteleer.
- 1991 Establishing a Personal Computing Laboratory for a College of Business, *Journal of Computer Information Systems*, Fall 1991. Co-authored with Terry L. Dennis. (3 blind reviews)
- 1989 PC Data Security, *Business*, April 1989. Co-authored with Terry L. Dennis. (2 blind reviews)
- 1988 A Study of the Effects of Three Commonly Used Software Engineering Strategies on Software Enhancement Productivity, *Information and Management*, Winter 1988. Co-authored with Robert P. Cerveney. (5 blind reviews)
- 1986 Large Business Organizations Use of PC Technology, *Journal of Systems Management*, Vol. 37, no. 6 (June 1986). Co-authored with Robert P. Cerveney. (3 blind reviews)

Chapters in Scholarly Books

- 2005 Discipline-based Scholarship, Equal Author, "IT-Supported Productivity: Paradoxes and Resolution in R&D," in Bendoly, E. and Jacobs, R.F. (Eds.), *Strategic ERP Extension and Use*. Co-Author with John E. Ettlie, September 5, 2005.

- 1997 *The Management Scientist*. Published by the West Publishing Company, St. Paul, Minnesota. Version 4.0, 1997. Co-authored with D. R. Anderson, D. A. Sweeney, and T. A. Williams. Manual included.

Co-Authored Commercial Software (All Written In Basic/MS Assembler):

Published by the West Publishing Company, St. Paul, MN

- The Management Scientist (Software & Manual).* 1988-97
 - Versions 1.0 - 4.0. Co-authored with D. R. Anderson, D. A. Sweeney, and T. A. Williams.
- The Data Analyst: A Microcomputer Software Package (Software & Manual).* 1986-96
 - Versions 1.0 - 4.0. Co-authored with D. R. Anderson, D. A. Sweeney, and T. A. Williams.
- Decision Support Software/Production and Operations Management (Software & Manual).* 1995
 - Version 1.0. Co-authored with Laurie & Terry E. Dennis.

Conference Papers

- 1997 Do Structured Development Methods Improve Productivity On Software Maintenance Projects? *Proceedings of the National Meeting of the Decision Sciences Institute: San Diego, California*. November 1997. Co-authored with Robert P. Cervený and G. Lawrence Sanders.
- 1989 A Study of the Efficiency of Structured Software Development Techniques, *Proceedings of the National Meeting of the Decision Sciences Institute: New Orleans, Louisiana*. November 1989. Co-authored with Robert P. Cervený.
- 1986 An Investigation into Factors Affecting the Implementation of Personal Computing Technology, *Proceedings of the National Meeting of the American Institute for Decision Sciences: Los Vegas, Nevada*. November 1986. Co-authored with Robert P. Cervený.
- 1983 Application Architecture and Technologic Efficiency: A Comparative Study of Computerized Bank Transaction Processing Systems, *Proceedings of the Annual Meeting of the Northeast Region of the American Institute for Decision Sciences: Philadelphia, Pennsylvania*. April 1983. Co-authored with Robert P. Cervený and Edwardo L. Rhodes.
- 1983 The Relationship Between Computer-Based Information Systems Support Efforts and the Hostility Dimension of the External Environments of Organizations: A Proposed Study, *Proceedings of the National Meeting of the American Institute for Decision Sciences: San Antonio, Texas*. November 1983. Co-authored with Robert P. Cervený.

Conference participation and workshops

- 1992-4 Japan Productivity Institute program at SUNY Buffalo, New York. Presented one-day seminars to executives from Japanese Corporations.
- 1996-8 Samsung, Inc, Seoul, Korea. Presented seminars at SUNY at Buffalo, New York to four groups of MIS executives from the Samsung Corporation. Topics included Process optimization; Capability Maturity Model; use of metrics in IT management, systems design, programming, and testing.

Organizations:

- Founder/Board Member, Central & Western NY chapter of Americas SAP Users' Group (ASUG). Sep '99 - Present

Institute & College Committee & Service Summary:

- Configured/implemented several networked computer labs at Rochester Institute of Technology, including software & hardware specifications and physical layout.
- College-wide Curriculum, Tenure & Promotion, Technology, and other committees.
- Chairman, Technology and Tenure & Promotion Committees.
- Member, Institute-wide Faculty Affairs Committee and external member of Tenure & Promotion Committees of other Colleges at R.I.T.